

Claims:

- 5 1. Axle assembly in portal arrangement, especially for a driven axle of
low floor vehicles having an axle housing (2, 102) with
- a main drive (3, 103),
 - portal drives (5, 106) fixed to both ends of the axle housing (2, 102),
 - wheel end drive assemblies (6, 108) fixed to portal drive houses
 - 10 (4, 105) and carrying vehicle wheel rims, and
 - wheel braking means connected to the wheel end drive assemblies (6, 108),
- characterised by that*
an outlet of each portal drive (104) is connected to the vehicle wheel
15 rims, respectively, by a hollow spindle (112) being rotatably arranged
in a gear housing (109) of each wheel end drive assembly (108) by
roller bearings (110, 111) with conical rollers in a pre-stressed
manner.
- 20 2. Axle assembly as claimed in Claim 1, *wherein* the hollow spindle
(112) is formed as a tubular shaft.
3. Axle assembly as claimed in Claim 1, *wherein* said outlet of the
portal drive (104) is formed as a driven gear (116) being connected
25 in a torque transmitting manner to a splined outer surface (115) of
said hollow spindle (112) at the vicinity of its end being opposite to
the vehicle wheel rim.
4. Axle assembly as claimed in Claim 1, *wherein* said wheel braking
30 means are connected to the gear housing (109) of the wheel end drive
assembly (108).
5. Axle assembly as claimed in Claim 4, *wherein* the wheel braking
means has a drum brake, and a first arm (123) holding a brake shoe

(124) of the wheel braking means as well as a second arm (126) pivoting a brake toggle (127) of the wheel braking means are formed on an outer surface of the gear housing (109).

- 5 6. Axle assembly as claimed in Claims 1, *wherein* first of the roller bearings (110) rotationally holding the hollow spindle (112) in the gear housing (109) of the wheel end drive assembly (108) is arranged on an end of the hollow spindle (112) being in the vicinity of the vehicle wheel rim, and the second roller bearing (111) is arranged on
10 another end of the hollow spindle (112) being at the portal drive (104).
- 15 7. Axle assembly as claimed in Claim 6, *wherein* an inner ring (117) of said second roller bearing (111) lies against a flange (119) formed on the hollow spindle (112) by the intervention of an adjusting spacer (118) and it is fixed in its axial position by the intervention of the driven toothed gear (116) of the portal drive (104) with a bearing backup nut (120) arranged on the inner end of the hollow spindle (112).
- 20 8. Axle assembly as claimed in Claim 1, *wherein* both of the roller bearings (110, 111) rotationally holding the hollow spindle (112) in the gear housing (109) of the wheel end drive assembly (108) are arranged on an end of the hollow spindle (112) being in the vicinity
25 of the vehicle wheel rim, and on another end of the hollow spindle (112) an inner ring (131) of a support bearing (130) is held in place, and an outer ring (132) of the support bearing (130) is fixed in the portal drive (104) house (105).
- 30 9. Axle assembly as claimed in Claim 1, *wherein* an oil throwing opening (128) is provided in the gear housing (109) of the wheel end drive assembly (108) in the vicinity of a driven toothed gear (116) of the portal drive (104), and an oil barrier (129) is formed in the gear

housing (109) at the penetration of the hollow spindle (112) through said gear housing (109).

- 5 **10.** Axle assembly as claimed in Claim 1, *wherein* a driving kinematical chain of the wheel end drive assembly (108) together with the bearings is formed as a pre-mounted compact unit, wherein the driving kinematical chain and the bearings include, at least, the gear housing (109) of the wheel end drive assembly (108), the hollow spindle (112), the first and second roller bearings (110, 111) and a support bearing (130) preferably arranged on the hollow spindle (112), a bearing backup nut (120) arranged on an inner end of the hollow spindle (112), a sealing ring (122) separating an inside of the gear housing (109) from an outworld as well as a driven toothed gear (116) of the portal drive (104).
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